



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

RBW6521A00138-W142AH-3T-1
Job Sheet 184292



Part No: RBW6521A00138-W142AH-3T-1 **Job Qty:** 3 ea

Part Name: Spline



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 10/4/18

Job Tracking No:

Due Date: 11/15/18

Created By: Patrick Lussier

Type: Stock

Description:

Note: DWG RBW6521A00138-W142AH-3T Rev. 5 IPP Rev. A 18.09.25 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	3 pcs		11/15/18	0.00	0.00	Purchasing		NOV 14 2018
110	Packaging	3 pcs		11/15/18	0.00	0.00	Packaging2		NOV 14 2018
120	QC	3 pcs		11/15/18	0.00	0.00	QC6		38
130	Packaging	3 pcs		11/15/18	0.00	0.00	Packaging3		9-89
140	QC21-FG	3 Ea		11/15/18	0.00	0.00	QC21		NOV 16 2018

Part Op 100 - Issue PO to P.J. MACHINAGE P/O: 041264 MANUFACTURE RBW6521A00138-W142AH-3T-1 AS PER DWG
Descriptions: -Certificate of conformity is required

oct 04. 2018 x 3 R h

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
RBW6521A00138-W142AH-3T-1P	Spline	3 (1 ea)	100-Purchasing	5127911

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	RBW6521A00138-W142AH-3T-1P	3	0	0

Part Specifications

Specifications could not be found.



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Plex 10/4/18 3:08 PM dart.Lussier.Patrick

Container No: S127913



Part: RBW6521A00138-W142AH-3T-1

Job No: 184292

Serial No/Batch: S127913

Revision: 5

Inspector:

Exp Date:

Instructions:

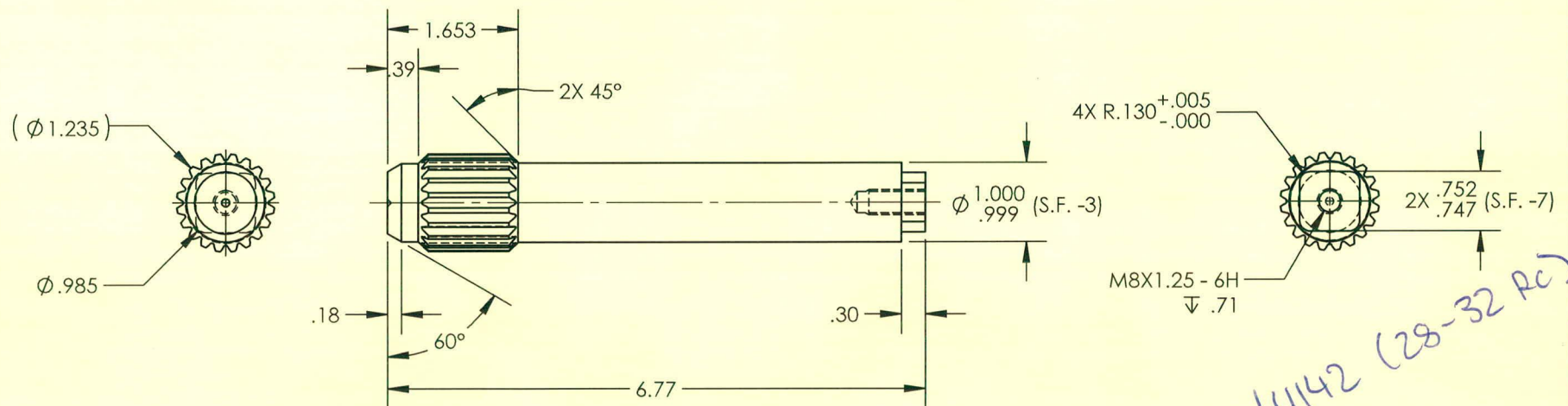
Date: 11/14/18

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18.0

12 17

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		-1 ADDED TOLERANCE TO R.125 AND LIMITS FOR .750 SQUARE DRIVE.	10/3/2012	RJC	SE
2	15-0159	-1 ADDED 4142 Q&T TO MATERIAL CALL OUT, CH'D RADII WAS R.125 +.005-.000 IS R.130 +.005-.000.	7/21/2015	RJC	JAG
3	16-0034	-1 ADDED DIM 6.77.	2/15/2016	DPD	JAG
4	16-0123	-1 ADDED FINISH SPEC.	8/18/2016	DEW	JAG
5	16-0266	-1 CH'D DIM WAS Ø1.000/.999 S.F. -3 IS Ø1.000/.999 (S.F. -3), WAS 2X .752/.747 S.F. -7 IS 2X .752/.747 (S.F. -7), CH'D MATERIAL WAS 4140/4142 Q&T IS 4140/4142, ADDED HEAT TREAT RC 28-34.	12/6/2016	RJC	SM



EXTERNAL SPINE DATA

NUMBER OF TEETH	20
MODULE	1.5
PRESSURE ANGLE	30°
STANDARD	1980
DEPTH	.0138
MAJOR DIAMETER	1.235
DIMENSION OVER Ø.125 PINS	1.386
TOLERANCE	-.004
DIMENSION OVER Ø.120 PINS	1.372

(-1)
SPLINE

DART AEROSPACE	
TITLE NUT TORQUE TOOL	
DWG NO. RBW6521A00138-W142AH-3T-1	REV 5
MAT'L 4140/4142 <i>4140 HT</i>	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT <i>RC 28-34</i>	.XXX ± .005 FRACTIONS ± 1/8
FINISH BLACK OXIDE	.XX ± .01 ANGLES ± 5°
SPEC QMSI-6.2.2. B.O. REV D	.X ± .1 SURFACES = 125/✓
DRAWN BY: PERRITT	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	AW139
SCALE 1:2	DATE 12/31/2008
SHEET 2 OF 8	

REV.	DESCRIPTION	DATE	BY	APPROVED
A	NEW ISSUE	17.09.12	VM	WM

SPECIFICATION CONTROL DRAWING

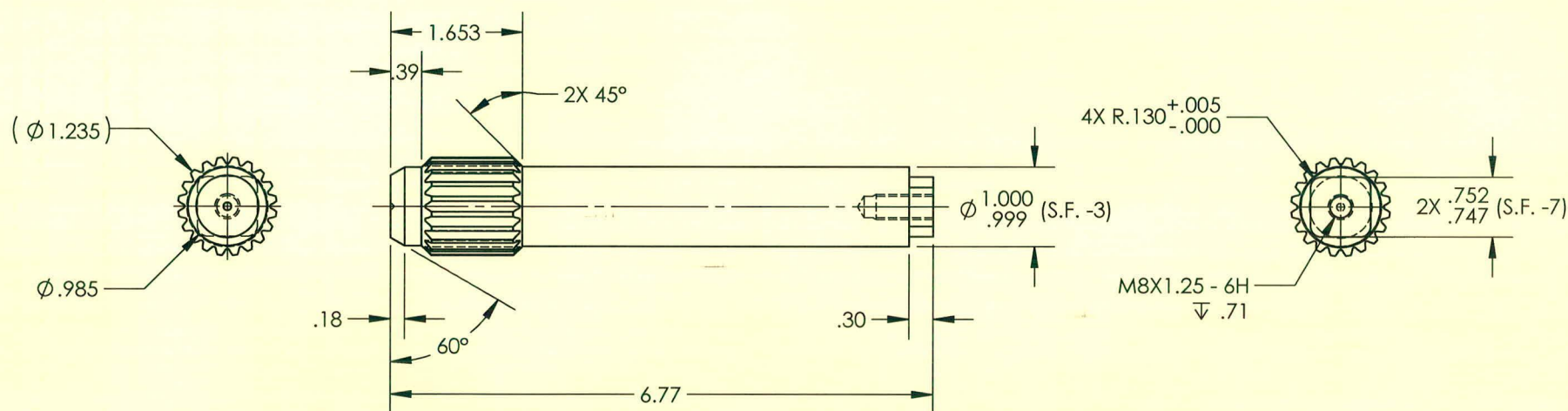
PURCHASE MATERIAL : AISI 4140 QUENCHED & TEMPERED STEEL ROUND BAR
 SPECIFICATION: ASTM 4140 QT or ASTM 4142 QT
 PART NUMBER: MT-4140QT-R [D.DDD]
 WHERE "D.DDD" = DIAMETER IN INCHES
 EG. 5/8" ROUND BAR = MT-4140QT-R0.625

 DART AEROSPACE			
Newbury, Ontario, Canada			
TITLE AISI 4140 Q&T ROUND BAR			
DWG NO.	REV		
	MT-4140QT-R		A
DESIGN BY:	VM 8/9/2017	XXX ± .005	FRACTIONS 2/16
DRAWN BY:	VM 09/14/2017	XX ± .01	ANGLES 2.5°
CHECKED:	VM 09/14/2017	± .01	SURFACES = 125
MFG. APPR:	DP 09/14/2017	1. DIMENSIONS ARE IN INCHES	
QA APPR:	PD 09/14/2017	UNLESS OTHERWISE SPECIFIED	
APPROVED:	WM 09/14/2017	2. INTERPRET DIM AND TOL PER	
DATE: 9/14/2017	SCALE: NTS	3. DIMENSIONAL LIMITS APPLY	
	WEIGHT: 0.0 LBS	AFTER PLATING	
		SHEET 1 OF 1	
COPYRIGHT © 2017 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

ECN 17-655

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REVISIONS					
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1		-1 ADDED TOLERANCE TO R.125 AND LIMITS FOR .750 SQUARE DRIVE.	10/3/2012	RJC	SE
2	15-0159	-1 ADDED 4142 Q&T TO MATERIAL CALL OUT, CH'D RADII WAS R.125 +.005-.000 IS R.130 +.005-.000.	7/21/2015	RJC	JAG
3	16-0034	-1 ADDED DIM 6.77.	2/15/2016	DPD	JAG
4	16-0123	-1 ADDED FINISH SPEC.	8/18/2016	DEW	JAG
5	16-0266	-1 CH'D DIM WAS Ø1.000/.999 S.F. -3 IS Ø1.000/.999 (S.F. -3), WAS 2X .752/.747 S.F. -7 IS 2X .752/.747 (S.F. -7), CH'D MATERIAL WAS 4140/4142 Q&T IS 4140/4142, ADDED HEAT TREAT RC 28-34.	12/6/2016	RJC	SM



EXTERNAL SPINE DATA

NUMBER OF TEETH	20
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TOLERANCE	-.004
DIMENSION OVER Ø.120 PINS	1.372

(-1)

SPLINE



TITLE

NUT TORQUE TOOL

DWG NO.

RBW6521A00138-W142AH-3T-1

REV
5

MAT'L 4140/4142

HEAT TREAT RC 28-34

FINISH BLACK OXIDE

SPEC QMSI-6.2.2, B.O. REV D

DRAWN BY: PERRITT

CHECKED: CLOUGH

OPPS APPR: ANDERSON

QA APPR: LINDSAY

APPROVED: GILBERT

SCALE 1:2

UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN INCHES

.XXX ± .005 FRACTIONS ± 1/8

.XX ± .01 ANGLES ± 5°

.X ± .1 SURFACES = 125/✓

1. BREAK ALL SHARP EDGES

.015 x 45° OR .015R

2. DIMENSIONAL LIMITS APPLY

AFTER PLATING

3. INTERPRET DIM AND TOL PER

ASME Y14.5M-2009

USED ON MODEL

AW139

DATE 12/31/2008

SHEET 2 OF 8



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041264**

Supplier: PJM001-VC
P.J. Machinage
1381 Rte Cite-Des-Jeunes
St-Lazare
QC
J7T 2B8
Phone: 450-455-0705

PO No: PO041264
PO Date: 10/4/18
Due Date: 11/15/18
Purchase Order Revision:
Revision Date:
Ship-To Contact: Lussier, PatrickPhone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	184292	RBW6521A00138-W142AH-3T-1P			Spline	Firmed		11/15/18	3 Ea	0 Ea	3 Ea	\$445.00/Ea	\$1,335.00

Line Item Note 6 weeks lead time

Grand Total: \$1,335.00

Order Notes

Procurement Quality Clauses
A005 RIGHT OF ENTRY
A008 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION SENT TO DART AEROSPACE)
A012 CHEMICAL AND PHYSICAL TEST REPORTS
A016 PERSONNEL QUALIFICATION
A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)
A026 CERTIFICATION OF MATERIAL CONFORMANCE
A041 QUALITY MANAGEMENT SYSTEM
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 10/4/18 3:11 PM dart.Lussier.Patrick

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Shipping Order

04/10/2018

P.J. Machinage (9052 9470 Qc Inc).
1381, Rte Cité-Des-Jeunes,
St-Lazare, Qc
J7T 2B8 *Tel.* : 450 455-0705

Order : 7137
Reference : PO041264 - S/O : 7137
Bid : 15192
Ship : Votre camion

Customer : 628

Dart Aerospace Ltd.
Accounts payable
1270 Aberdeen St
Hawkesbury, Ontario
K6A 1K7

Ship To

Same

Fax: 1 613 632-5246

<i>Item No.</i>	<i>Description</i>	<i>Qty</i>	<i>Qty. Delivere</i>	<i>B/O Qty</i>
001	RBW6521A00138-W142AH-3T-1 Rev. 5 Nut Torque Tool	3	3	0

P.J. Machinage retains ownership of all goods sold and other work-product delivered to or performed for its customer until full and complete payment of the underlying invoice, even in circumstances where the part to be machined or materials were provided by the customer. In cases where the part of materials belonged to the customer before it is remitted to P.J. Machinage for the prupose of performing work thereon, its delivery to P.J. Machinage shall entail a transfer of the underlying rights of ownership of the customer over said part or materials.

Shipping : Your truck Dicam *Ref.* : D27 110 856
Package No : _____
Merchandise Received: 12/11/2018

PJ Machinage

Certificate of conformance

Sold to:

Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON, K6A 1K7

Supplier address:

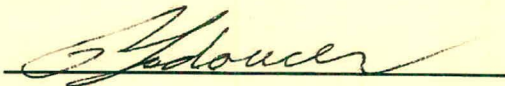
PJ Machinage
1381 Route Cité-Des-Jeunes
St-Lazare, Qc, J7T 2B8

Purchase Order: PO041264 ✓

This is to certify that the below names items were inspected and/or tested to your drawings, specifications and purchase order. Objective evidence are shipped with the products and are on file to support the verifications and/or tests and can be made available on request, unless otherwise noted.

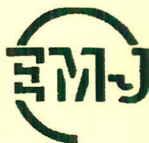
<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
RBW6521A00138- W142AH-3T-1 Rev.5 ✓	3 ✓	<u>Nut Torque tool</u>

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 , 12/11/2018

100
100
100

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS



Earle M. Jorgensen
(Canada) Inc.

Page 01 of 02

Certification Date
12-SEP-2017

ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

133616
PART NUMBER/NUMÉRO DE PIÈCE
506429

EARLE M JORGENSEN CAN DIV RMCL
1255, AVE LAPLACE
VILLE DE LAVAL QC H7C 2N6

Invoice Number
T370153

SOLD TO: P.J. MACHINAGE
VENDU À: 9052-9470 QUEBEC INC
1381 ROUTE DE LA CITE DES JEUNES
SAINT- LAZARE QC J7T 2B8

SHIP TO:
EXPÉDIÉ À:

P.J. MACHINAGE
9052-9470 QUEBEC INC.
1381 ROUTE CITE DES JEUNES
SAINT- LAZARE QC J7T 2

Description: 4140/4142 HR HT BAR STRESS FREE 269/321 BHN
1-1/2 RD X 20' R/L
HEAT: 75066774
ITEM: 506429
Line Total: 241 LB

Specifications:
ASTM A193 GR B7 16
ASTM A434 GR BC 06
ASME SA193 GR B7

CHEMICAL ANALYSIS

C	MN	P	S	SI	NI	CR	MO
0.42	0.89	0.01	0.029	0.24	0.15	0.90	0.17
CU	SN	AL	V	NB			
0.21	0.013	0.022	0.004	0.002			

RCPT: R264638

COUNTRY OF ORIGIN : USA

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR KSI	ULT TEN KSI	%ELONG IN 02 IN	%RED IN AREA	HARDNESS BHN
	130.0	143.0	21.0	59.0	299

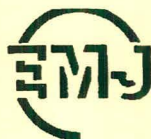
The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcrites du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.
The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

JOANNE DESPRES

MANAGER QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ

CERTIFICATE OF TEST CERTIFICAT D'ESSAIS



Earle M. Jorgensen
(Canada) Inc.

Page 02 of 02

Certification Date
12-SEP-2017

FORMER ORDER NUMBER
NUMÉRO DE COMMANDE DU CLIENT

133616
PART NUMBER/NUMÉRO DE PIÈCE
506429

EARLE M JORGENSEN CAN DIV RMCL
1255, AVE LAPLACE
VILLE DE LAVAL QC H7C 2N6

Invoice Number
T370153

SOLD TO: P.J. MACHINAGE
VENDU À: 9052-9470 QUEBEC INC
1381 ROUTE DE LA CITE DES JEUNES
SAINT- LAZARE QC J7T 2B8

SHIP TO:
EXPÉDIÉ À:

P.J. MACHINAGE
9052-9470 QUEBEC INC.
1381 ROUTE CITE DES JEUNES
SAINT- LAZARE QC J7T 2

Description: 4140/4142 HR HT BAR STRESS FREE 269/321 BHN
1-1/2 RD X 20' R/L Line Total: 241 LB

HEAT: 75066774 ITEM: 506429

END-QUENCH HARDENABILITY (JOMINY - RC)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
57	57	57	57	57	57	56	55	54	52	51	50	49	48	47
16	18	20	22	24	26	28	30	32						
46	45	44	44	42	42	40	40	38						

GRAIN SIZE : 5 - 8

MATERIAL IS FREE FROM MERCURY CONTAMINATION
NO WELD REPAIR PERFORMED ON MATERIAL

THERMAL TREATMENT: OK

AUSTENIZE 1650 1.00

QUENCH 0 0.00 WATER

TEMPER 1400 1.00

MACRO: OK

MICRO1: OK

COMMENTS

melted and mfg in usa
reduction ratio 38.5:1

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcrites du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

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Material did not come in contact with mercury while in our possession./Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

JOANNE DESPRES

MANAGER QUALITY ASSURANCE
GÉRANT DE L'ASSURANCE QUALITÉ



Certificat de Conformité / Certificate of Compliance

(013784-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
Tel: 514-335-3666 Fax: 514-335-3868
www.groupaltech.com

Bon de Livraison / Packing Slip

013784 - 1

Livré à / Ship to

PJ MACHINAGE

1381 Rte de la Cité-des-Jeunes
St-Lazare, QC, J7T2B8
CANADA

Tel.: 450-455-0705 Fax.: 450-455-1167

Client / Customer:

PJ MACHINAGE

1381 Rte de la Cité-des-Jeunes
St-Lazare, QC, J7T2B8
CANADA

BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.		Bon de commande Client Customer Purchase Order No.			
08-Nov-2018		Aman			135492			
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Quantités / Quantities Qté NC/ NC Qty		À venir/ Back Order
1	LOT 3 PCS Rev.	LOT 3 PCS 01 -OXIDE BLACK [OXIDE BLACK]	OXIDE-BLACK MIN-CHG	3	3	0	0	0

DAS
38
9-89

Notes Additionnelles / Additional Notes

Épaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
Our financial and legal responsibility will not be higher than the amount of invoice.

240
33
00-0

BON DE COMMANDE / PURCHASE ORDER

Date/Time: 11/12/2018 14:11:14

Page - 1

Eutectic Canada Inc.

920 André-Liné

Granby, Québec

J2J 1E2

Tel.: (450) 378-9841

Fax: (450) 378-9875

E-mail: eutectic@eutectic-na.com

Fournisseur P.J. Machinage (9052 9470 Qc Inc.)

Supplier: 1381 Rte Cite-Des-Jeunes

5101641 St-Lazare QC

J7T 2B8

CA

Tel.: (450) 455-0705

Fax: ()

Expédiez à Eutectic Canada Inc.

Ship To: 428 Aimé-Vincent

Vaudreuil-Dorion QC

J7V 5V5

CA

No. Taxe Féd./Fed Tax No:

R105526362

No. Taxe Prov./Prov. Tax No:

1000387131

Bon de Commande

Order Number 64475 - - OP

Date de la Commande / Order Date: 11/12/2018

Livraison Requête / Requested: 11/12/2018

Instructions :

Livraison Promise / Promised Delivery: 11/12/2018

Responsable / Responsible Person: NSCROCCA

Devise / Currency: CAD

Transporteur / Carrier:

Transport / Freight:

Ligne	Rev	Article Fournisseur	Qté Commandée	Unité	Prix Unitaire	Unité Primaire	Extension	Livraison Requête
Line		Supplier Item/Description	Qty Ordered	UOM	Unit Price	PR.UM	Extended Price	Requested
1.0	0	FABRIQUER PIECE EN SS 304	1.000	UN	135.0000	UN	135.00	11/12/2018
		REF JOB 1744						
								FABRIQUER PIECE EN SS 304

****REF JOB 1744*****

PIECE DEJA RAMASSER

Total:

135.00

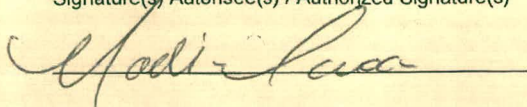
Veuillez Accuser Réception de notre commande par télécopieur. La Date de Livraison, Quantité et Conditions doivent être respectés. Tout changement doit nous être signifié immédiatement par télécopieur. Notre no. de bon de commande doit apparaître sur toute documentation. Notez que tout matériel doit être clairement identifié, incluant un numéro de Lot, Coulé, etc..., et nous être expédié avec un Certificat de Conformité/Analyse correspondant.

Please confirm order by return fax. The ordered delivery date, quantity and conditions should be respected. Changes must be notified by fax immediately.

Our order no. must be quoted on your documentation. Please note that all material should be clearly identified, including Lot No., Batch, etc..., and be accompanied with the corresponding Certificate of Compliance/Analysis.

Signature(s) Autorisée(s) / Authorized Signature(s)

Date:



11/12/18

